

REMARKS

Claims 10-18 are pending in this application. The declaration is deemed defective for not referring to the parent PCT application. The drawings and Abstract stand objected to. Claims 10-18 stand rejected under 35 USC 112, second paragraph, as being indefinite. Claims 10-17 stand rejected under 35 USC 102(b) as being anticipated by Morley. Claims 10-12 and 15-17 stand rejected under 35 USC 102(b) as being anticipated by Hirst. Claims 10-12 and 14-17 stand rejected under 103(a) as being unpatentable over Heumann in view of Japanese Patent 52-68,610.

Objection to the Declaration:

The Examiner objects to the declaration because it does not refer to the international PCT application upon which priority is based. The Applicants respectfully traverse the objection to the declaration.

The present application is filed under 35 USC 371 as the national stage of an PCT international application. Under 35 USC 365, this national application is entitled to the right of priority based on its prior filed international application. In accordance with 35 USC 120, the first paragraph of this application has been amended to include the specific reference to the earlier filed international application. 35 USC 371(c)(4) contains no requirement for the declaration to contain a reference to the international application. Accordingly, the Applicants believe that all requirements for obtaining priority have been satisfied.

The undersigned attorney also notes that in previous applications submitted by the present assignee under 35 USC 371 where the declaration have been prepared to refer to the parent PCT international application, objections to the declaration have been received and the applicants were directed to remove such references. It would appear that there is disagreement within the Office regarding this issue. After researching this issue, the undersigned attorney believes that the correct course of action is not to include a reference to the international application in the declaration, and many such declarations have been accepted by the Office in other recently-filed applications.

Objections to the Drawings:

Replacement sheets 1 and 2 containing revised Figures 1 and 2 are submitted with this response. All of the corrections suggested by the Examiner have been incorporated in the revised figures, thereby overcoming the objections to the drawings.

Objections to the Abstract:

The Abstract is amended herein to incorporate all of the corrections suggested by the Examiner, thereby overcoming the objections to the Abstract.

Rejections under 35 USC 112, second paragraph:

Claims 10, 12, 14 and 18 are amended herein to correct the indefiniteness identified by the Examiner, thereby overcoming the rejection under 35 USC 112.

Rejections under 35 USC 102 in view of Morley:

Claims 10-17 stand rejected as being anticipated by Morley 2,488,875.

Independent claim 10 has been amended to clarify the limitation that "the guide-blade root and the guide-blade tip of each guide blade are secured by a manually releasable clamping device accessible from the combustion chamber without the inner casing having to be opened." Morley teaches away from such limitations because both the root 22 and tip 21 of the guide blade of Morley are secured by structures that are not accessible from the combustion chamber 12 and that are not accessible without the inner casing 26, 30, 48 having to be opened. Access to the unnumbered bolt at the lower left portion of FIG. 2 of Morley is blocked by the walls of the combustion chamber 12, and access to the bolt 49 is blocked by the outer casing 32 and the support ring 30, so that a fitter working within the combustion chamber would be unable to release the guide blade root 22 or tip 21. Thus, Morley does not support the rejection of claim 10 and its dependent claims 11-17 under 35 USC 102.

The claims depending from claim 10 add further limitations that are not anticipated by Morley. By way of example, but not limitation:

Morley does not describe the elongated hole added to claim 12 to allow the tie rod to move radially away from a clearance profile of the guide blade.

Morley does not describe the claim 13 limitation of a parking position wherein the clamping device can be fixed. The bolts of Morley may be removed to release the connected structures from their operating positions, but Morley fails to describe or to illustrate any second "parking" position wherein the clamping structures can be fixed to expose the guide-blade root or tip.

Accordingly, reconsideration and withdrawal of the rejections of claims 10-17 under 35 USC 102 in view of Morley are respectfully requested.

Rejections under 35 USC 102 in view of Hirst:

Claims 10-12 and 15-17 stand rejected under 35 USC 102(b) as being anticipated by Hirst 5,073,084.

Hirst not only fails to describe the limitations of the present claims, he fails to even mention the problem solved by the present invention. Hirst is directed to an improved labyrinth seal disposed at the tip end of a guide blade, whereas the present invention is directed to a manner of affixing the guide blade so that they can be removed from the combustion chamber without opening the inner casing.

Hirst does not enable how his blades are affixed, but rather he simply says at column 2, lines 13-15 that "the turbine section has a stage of guide vanes 20 affixed in known manner via their radially outer ends" and at column 2 lines 45-46 that "Each guide vane 20 is affixed via its outer end to fixed engine structure in known manner." FIG. 2 of Hirst seems to show a bolt or pin arrangement (unnumbered) at the radially outer end of the blade, but the operation of and access to such bolts or pins are not described.

The pins 44 of Hirst that the Examiner equates to a clamping device are located only at the tip of the blade, thus failing to anticipate any sort of clamping device at the root end of the guide blade as required in the present claims 10-12 and 15-17. Furthermore, the pins 44 of Hirst actually teach away from the clamping device of the claims which is "manually releasable" because the pins are described by Hirst at column 2, lines 37-38 as being press fit or brazed in place, neither of which would be manually releasable. Hirst does not describe how the bolt or pin arrangement shown at the radially outer end of the blade in FIG. 2 is affixed.

Thus, Hirst fails to describe the features of independent claim 10 or its dependent claims 11, 12 and 15-17, and the reconsideration and withdrawal of the rejection of claims 10-12 and 15-17 under 35 USC 102 in view of Hirst are respectfully requested.

Rejections under 35 USC 103 in view of Heumann and Japanese patent 52-68,610:

Claims 10-12 and 14-17 stand rejected under 35 USC 103(a) as being unpatentable over Heumann in view of Japanese patent '610.

Independent claim 10 has been amended herein to include the limitation of "a manually releasable clamping device accessible from the combustion chamber without the inner casing having to be opened." Heumann clearly teaches away from this limitation, as illustrated in FIG. 1 of Heumann which illustrates a combustor mounting flange 22 blocking access to the fastener 26 and nut 50 from the combustion chamber 10. The Japanese '610 reference fails to rectify this shortcoming of Heumann. Thus, access to the fastener 26 and nut 50 is not achieved from the combustion chamber 10, but rather must be achieved by disassembling the entire outer case 16. Thus the rejection of independent claim 10 and its dependent claims 11, 12 and 14-17 under 35 USC 103 is not supported by the art and should be withdrawn.

The claims depending from claim 10 add further limitations that are not taught by the combination of Heumann and Japanese '610. By way of example, but not limitation:

The combined references do not describe the elongated hole added to claim 12 to allow the tie rod to move radially away from a clearance profile of the guide blade.

The combined references do not describe the claim 13 limitation of a parking position wherein the clamping device can be fixed. The bolts of the references may be removed to release the connected structures from their operating positions, but the prior art fails to describe or to illustrate any second "parking" position wherein the clamping structures can be fixed to expose the guide-blade root or tip.

Accordingly, reconsideration and withdrawal of the rejections of claims 10-12 and 14-17 under 35 USC 103 are respectfully requested.

Claim 18:

Claim 18 has been extensively amended in response to the rejection under 35 USC 112 and is now in condition for examination. Claim 18 has also been amended to add additional limitations to clarify the patentability of the claimed method over the cited prior art. In particular, claim 18 includes the steps of "releasing a root clamping device ... and displacing the root clamping device into a parking position exposing the root of the first guide blade and securing the root clamping device to the inner casing in the parking position displaced from a clearance profile of the first guide blade." None of the prior art references describe such a combination of steps wherein a root clamping device is released then secured in a different position to provide clearance for removing the guide blade. Claim 18 also includes the limitations of "releasing a tip clamping device ... and displacing the tip clamping device into a parking position so that the guide-blade tip is exposed, and securing the tip clamping device to the inner fixing ring in the parking position displaced from a clearance profile of the first guide blade." None of the prior art references describe such a combination of steps wherein a tip clamping device is released then secured in a different position to provide clearance for removing the guide blade. Finally, claim 18 includes the limitations of "displacing the first guide blade axially ... past the root and tip clamping devices into the combustion chamber and out of the turbine without opening the inner casing." None of the cited prior art references even recognize the need for such a capability, and none inherently provide such a process.

New claims 19 and 20:

New claims 19 and 20 are added to more fully encompass the claimed subject matter of the invention. No extra claim fees are required.

Serial No. 10/539,930  
Atty. Doc. No. 2002P20039WOUS

Conclusion:

The commissioner is hereby authorized to charge any appropriate fees due in connection with this paper, or to credit any overpayments, to Deposit Account No. 19-2179.

Respectfully submitted,

Dated: 2/2/17

By: John P. Musone

John P. Musone  
Registration No. 44,961  
(407) 736-6449

Siemens Corporation  
Intellectual Property Department  
170 Wood Avenue South  
Iselin, New Jersey 08830